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GDM
DØ Requirements / Schedule

10th Jan 2006

Gavin Davies, Imperial College London

Opening remarks

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- Goals driven by physics and by being able to provide the computing that these require in the most efficient overall manner
- DØ reliant on SAMGrid for
  - All data handling
  - Most ($\rightarrow$ basically all) production computing
- Reliance increasing
  - Increased dependence / increased functionality
- Not surprising
  - We are a co-founder
  - It's the shared / approved grid route..
- Reflected in goals for CY 2006
  - Joint effort between central SAMGrid team and remote sites

CY2006 Goals (as of Dec 05)

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Use of luminosity database	1st Jan✓
Automated production of MC on LCG	Mid Jan
Demonstration of primary processing with SAM-Grid	End Jan
Sustainable MC capacity of 5M events /week	End Feb
Completion of trigger database taskforce	1st Mar
Deployment of SAM-Grid v7 (inc. d0runjob, MC and fixing)	1st Mar
Entire Run IIa data (~1.3fb-1) set processed.	5th Mar
p20 MC certified	19th Mar
p20 MC in production on the farms	9th Apr
CAB operating as part of Fermigrid / OSG	1st May
SAM performance – increased cache metrics/ functionality	1st Jun
SAM-Grid performance – ease of deployment (deployment team*), increased stability	1st Jun
Primary processing with SAM-Grid as default	Mid July
Automated production of MC with OSG	End Oct
Sustainable MC capacity of 7M events /week	1st Nov
Strategy for improved user analysis - grid user case?, resilient dcache?	Mid Nov
Automated submission of MC (or reprocessing) by SAM-shifter	Mid Dec

* Activity also implicit in increased production rates – to start now.

Trigger Data Base Task Force

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- Concerns raised in 05 wrt bringing this complex project to timely completion, esp. in view of key developer moving on..
- Concern raised wrt some database applications in a wider context in GDM in the Fall, esp. wrt long term maintainability.
- Run II database group formed

Run II Experiments Databases and DØ Trigger Database Taskforce

Database Applications at CDF and DØ

While most of the database applications for CDF and DØ are now quite mature and not under active development there remains some work to do reach a situation where all applications are providing the functionality required for the upgraded detectors and are in a fully maintainable state for the remainder of Run II.

The Computing Division proposes to embark on a program of work to assist the experiments to move all applications into a finished and fully maintainable state.

We have identified a team/project leader as an addition to the Running Experiments department to begin organizing and carrying out this program of work, in conjunction with experiment personnel who are responsible for various database applications. Igor Mandrichenko from CD will assume this responsibility of CD Database Applications Coordinator for CDF and DØ in mid November.

The Trigger Database application at DØ is one that is not yet in its final finished form. Deployment of the Frontier application at CDF is another area where work is still underway.

- Initial project: DØ Trigger DB
- Timeline driven by Run IIb shutdown
- Good progress being made, but timeline very challenging

SAMv7 transition (as of Dec 05)

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- A big change - effects many areas –
  - Driven by both the experiment and the SAM team
- Dedicated "project" set-up in late Nov.
  - Timelines / work plans under evolution
  - Impacts on SAMGrid (~60 day FTE) and runjob
  - Impacts on online system – few weeks effort
  - Impacts on MC generation process (cardfiles, request systems)
  - Impacts on users – accounting, scripts , tools…
- Aim: Address this, whilst maintaining other activities
  - Will be challenging...need resources
  - Discussed at SAM Stakeholders meeting on Dec 13th

Re-fixing

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- Mid-dec: Problem found with the hadronic inter-phi calibration made in the post-reprocessing data fixing
- Re-fixing of high priority Moriond skims already well underway
  - Major effort over holiday period from CD and experiment – thanks.
    - Thanks also to CMS and CDF for offer of access to cpu.
  - Effort moved from 'other' goals
  - System's flexibility / existing developments serve us well
- Plan to re-fix bulk of data from mid-jan to end Feb
  - Very tight…significant FNAL load
- Trying to minimise impact on other goals, by pushing / re-ordering associated goals
  - e.g. Ability to fix off-site with SAMGrid and LCG or OSG
  - e.g. SAMGrid deployment team
- Some impact on other goals (SAMv7 transition) inevitable
  - Will increase manpower pressure…

Conclusions

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- DØ has extensive computing plans for CY2006, driven by our physics schedule
- Naturally many rely on SAMGrid
  - Will require increased support
- Databases other main area
  - Several ‘smaller’ issues raised at Run II Review / FNAL TF not mentioned here
- Re-fixing
  - Unfortunate, but has to be done
    - Good has come it – pushing existing goals / improved procedure
    - Thanks to those who have already assisted

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Back-up slides

DØ News: Luminosity DB

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Folder: GENERAL
From: mundim@fnal.gov
Subject: Luminosity database in production
Date: 03-JAN-2006 23:08
Expires: 04-MAR-2006 23:08

Dear Collaborators

We would like to announce that the Luminosity Database is in production. There is still some fine tunning to be done, for which your help is welcome. The Luminosity Database can be used for:

1 - luminosity reports: go to http://d0db.fnal.gov/lm_db/cgi/lmdb_main.py

2 - calculate the luminosity for your data: use getLuminosity (setup lm_tools) the same way as announced previously for stage3 files, but changing the option "stage3" to "lmdb". Example:

```
setup lm_tools
setup d0_config (this is not required if you have done setup D0RunII)
getLuminosity --lmdb --dump 3039999
```

The "runrange" option is a bit slower than for stage3, but we are working to improve it and plan to release a new version this week.

Please, check the documentation (http://www-d0.fnal.gov/d0usr/products/lm_tools/doc) for the generation of the parentage files for lmdb and about some changes in "runrange" option.

Kindly let us know of any difficulties sending a message to

d0luminosity@fnal.gov.

Best regards,

Luiz Mundim and Greg Snow
and the Luminosity Group

Extract from Db Charge..

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